

*Response**Serial No.: 10/081,351**Confirmation No.: 9769**Filed: February 22, 2002**For: COATING COMPOSITIONS CONTAINING LOW VOC COMPOUNDS*

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Remarks

The Office Action mailed December 23, 2003 has been received and reviewed. Reconsideration and withdrawal of the rejections are respectfully requested.

The 35 U.S.C. §§102 and 103 Rejections

Claims 1-45 were rejected under 35 U.S.C. 102(a) as being anticipated by Thetford et al. (U.S. Patent No. 6,197,877) and under 35 U.S.C. 102(b) as being anticipated by Thetford et al. (WO 94/21368). Claims 1-45 were also rejected under U.S.C. § 103(a) as being unpatentable over these same documents. Applicants respectfully traverse these rejections.

The present invention provides a coating composition that includes (i) a latex polymer; and (ii) a low VOC coalescent. As recited in claim 1, the coalescent has the formula: $R^1-(C(O)-X-O)-R^2$, wherein: R^1 , X , r , n , and R^2 are defined, and a volatile organic content of less than about 50%.

Neither cited document discloses or suggests a coalescent having the claimed formula or properties *in combination with a latex* polymer. In contrast, the cited documents disclose the use of dispersants to disperse various types of particles in a liquid medium. More particularly, the cited documents disclose pigment dispersants that can then be used to color "paint" or ink compositions.

Although "pigments, extenders and fillers for paints and plastics materials" are disclosed in both documents as examples of particles, there is no teaching or suggestion that the particles could be latex particles or that the composition could be a latex paint.

It is respectfully submitted that the term "paint" in these documents is not synonymous with "latex paint"; rather, latex paints represent only one class of paints.¹ Moreover, the cited documents were also directed to inks, which are generally solvent-based compositions. Thus, the cited Thetford et al. documents fail to teach or suggest latex polymers or latex paints, and both fail to disclose the use of a coalescent in combination with a latex polymer.

¹ A significantly large number of paints comprise solutions of polymers and do not comprise latex polymers. For example, in 2001 the paint industry sold \$+ Million pounds of coatings (dry weight). Of these, less than half were water-based latex paints.

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Both Thetford et al. documents are directed to dispersants. Applicants respectfully submit that the purpose and function of the dispersants in the cited documents is far removed from Applicants' instantly claimed coalescent composition.

By way of background, a dispersant is a material that is added to facilitate the dispersion of a pigment in a liquid medium (e.g., a solvent) and to prevent undesirable re-agglomeration of the pigment particles. Commercial pigment dispersions (also called "colorants" which include a pigment and a dispersant) are designed to be stable so that the pigment can be added to an ink or paint in a reliable manner and without undue agglomeration or settling of the pigment prior to its incorporation into the ink or paint.

In contrast, a coalescent is a material that is added to a latex polymer composition to facilitate film formation. The coalescent functions as a solvent as well as a plasticizer for the latex polymer particles to soften the latex polymer particles and assist in the formation of a continuous coating or film after applying to a surface and allowing to dry.

That is, a dispersant helps pigment particles *stay apart* in a colorant; a coalescent helps latex polymers *merge together* into a continuous film upon drying.

It is respectfully submitted that a compound that functions as a "dispersant" (as described in the cited documents) would not necessarily function as a "coalescent." There has been no showing in the Office Action that such a function would be provided. Thus, the Examiner's rejection is apparently based on the doctrine of inherency. It is respectfully submitted that this is inappropriate.

For inherency to apply, the missing descriptive information (i.e., that the dispersants of Thetford et al. are coalescents) must necessarily be present in one of the cited documents such that one of skill in the art would recognize such a disclosure. A compound that stabilizes a dispersion of solid particles in a liquid medium would not necessarily coalesce latex particles to form a film upon coating and drying. Consequently, there can be no recognition by one of skill in the art that the dispersants of Thetford et al. necessarily function as coalescents for latex polymers. Furthermore, inherency must be a necessary result, not merely a possible result. That is, the doctrine of inherency only applies if there is at least a reasonable likelihood that one

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of skill in the art could have discovered or recognized that the dispersants of Thetford et al. function as coalescents for latex polymers without specific guidance. In sum, the subject matter relied upon must be disclosed in a manner to place it in possession of the public. (See, e.g., Akzo N.V. v. United States Int'l Trade Comm'n, 1 USPQ2d 1241 (Fed. Cir. 1986)). Clearly, this is not the situation with the documents cited by the Examiner.

Assuming, *arguendo*, that a certain compound could provide both functions, the amount of a compound that is used as a dispersant is quite low relative to the amount of a compound that is required to function as a coalescent. It is unlikely that the small amount of a dispersant that would be introduced via a colorant (the typical way in which a dispersant is added to a paint) would be present in a sufficient quantity to function as a coalescent in the overall paint. As a result, a paint formulator would not look to the colorant art for suitable coalescents, and would not look to introduce a coalescent via a colorant.

In summary, neither document makes any specific mention of coalescents (let alone Applicants' particular coalescents) or of a latex polymer, and neither document suggests that the disclosed dispersants could function as coalescents for a latex polymer.

Withdrawal of these rejections is respectfully requested.

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Summary

It is respectfully submitted that the pending claims 1-45 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
Brandenburger et al.

By

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CERTIFICATE UNDER 37 CFR 1.8:

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR 1.6(d) to the Patent and Trademark Office, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of February, 2004, at 10:35 A.M. (Central Time).

By: Sandy Truehart
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